

WHAT IS CLAIMED IS:

- 1 1. A method for continuous allocation of real-time traffic in a communication network, comprising the steps of:
 - 3 allocating a first unit of real-time data for transmission during a first interval with a first transmission rate;
 - 5 allocating non-real-time data for transmission during a second interval;
 - 7 allocating a second unit of real-time data for transmission during a third interval with a second transmission rate; and
 - 9 allocating a third unit of real-time data for transmission during said third interval with said second transmission rate.
- 11 2. The method of Claim 1, wherein said real-time data includes speech data.
- 13 3. The method of Claim 1, wherein each said first unit, second unit and third unit of real-time data comprises a respective 20 ms signal output from a speech codec.

1 4. The method of Claim 1, wherein said communication
2 network comprises a TDMA communication network.

3 5. The method of Claim 1, wherein each of said intervals
4 comprises a block in a timeslot.

5 6. The method of Claim 1, wherein said first transmission
6 rate comprises a transmission at a full-rate.

7 7. The method of Claim 1, wherein said first transmission
8 rate is a higher rate than said second transmission rate.

9 8. The method of Claim 1, wherein said second
10 transmission rate comprises a transmission at a half-rate.

11 9. The method of Claim 1, wherein said non-real-time data
12 comprises control data.

1 10. A method for continuous allocation of real-time
2 traffic in a communication network, comprising the steps of:
3 allocating a first unit of real-time data for transmission
4 during a first interval with a first transmission rate;
5 allocating non-real-time data for transmission during a
6 second interval;
7 allocating a second unit of real-time data for transmission
8 during said second interval with a second transmission rate; and
9 allocating a third unit of real-time data for transmission
10 during said second interval with said second transmission rate.

11 11. The method of Claim 10, wherein the step of allocating
12 said non-real-time data further comprises allocating said non-
13 real-time data for a first timeslot, and the steps of allocating
14 said second unit of real-time data and said third unit of real-
15 time data further comprises allocating said second unit of real-
16 time data and said third unit of real-time data for a second
17 timeslot.

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1 12. The method of Claim 10, wherein said first and second
2 units of real-time data are allocated to a first user, and said
3 third unit of real-time data is allocated to a second user.

4 13. The method of Claim 10, wherein said real-time data
5 includes speech data.

6 14. The method of Claim 10, wherein each of said first
7 unit, second unit and third unit of real-time data comprises a
8 respective 20 ms signal output from a speech codec.

9 15. The method of Claim 10, wherein said communication
10 network comprises a TDMA communication network.

11 16. The method of Claim 10, wherein said communication
12 network comprises a Compact EDGE network.

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1 17. The method of Claim 10, wherein each of said intervals
2 comprises a block in one or more timeslots.

3 18. The method of Claim 10, wherein said first
4 transmission rate comprises a transmission at a full-rate.

5 19. The method of Claim 10, wherein said first
6 transmission rate is a higher rate than said second transmission
7 rate.

8 20. The method of Claim 10, wherein said second
9 transmission rate comprises a transmission at a half-rate.

10 21. The method of Claim 10, wherein said non-real-time
11 data comprises control data.

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1 22. A method for continuous allocation of real-time
2 traffic in a communication network, comprising the steps of:
3 allocating a first unit of real-time data for transmission
4 during a first interval with a predetermined transmission rate;
5 allocating a second unit of real-time data for transmission
6 during said first interval;
7 allocating non-real-time data for transmission during a
8 second interval;
9 determining if said second interval is not contiguous with
10 said first interval; and
11 if said second interval is not contiguous with said first
12 interval, allocating a third unit of real-time data and a fourth
13 unit of real-time data for transmission during a third interval
14 with said predetermined transmission rate, and allocating a
15 fifth unit of real-time data and a sixth unit of real-time data
16 for transmission during a fourth interval with said
17 predetermined transmission rate, said third interval contiguous

1 with said second interval, and said fourth interval contiguous
2 with said third interval.

3 23. The method of Claim 22, wherein said first unit of
4 real-time data includes speech data.

5 24. The method of Claim 22, wherein each of said first
6 unit, second unit, third unit, fourth unit, fifth unit and sixth
7 unit of real-time data comprises a 20 ms signal output from a
8 speech codec.

9 25. The method of Claim 22, wherein said communication
10 network comprises a TDMA communication network.

11 26. The method of Claim 22, wherein said communication
12 network comprises a Compact EDGE network.

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1 27. The method of Claim 22, wherein each of said intervals
2 comprises a block in a timeslot.

3 28. The method of Claim 22, wherein said predetermined
4 transmission rate comprises a transmission at a half-rate.

5 29. The method of Claim 22, wherein said non-real-time
6 data comprises control data.

1 30. A system for continuous allocation of real-time
2 traffic, comprising:
3 a network control unit; and
4 a terminal unit coupled to said network control unit by a
5 transmission medium, said network control unit further
6 comprising:
7 means for allocating a first unit of real-time data for
8 transmission during a first interval with a first transmission
9 rate;
10 means for allocating non-real-time data for transmission
11 during a second interval;
12 means for allocating a second unit of real-time data for
13 transmission during a third interval with a second transmission
14 rate; and
15 means for allocating a third unit of real-time data for
16 transmission during said third interval with said second
17 transmission rate.

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1 31. The system of Claim 30, wherein said first unit of
2 real-time data includes speech data.

3 32. The system of Claim 30, wherein each of said first
4 unit, second unit and third unit of real-time data comprises a
5 20 ms signal output from a speech codec.

6 33. The system of Claim 30, wherein said system comprises
7 a TDMA communication system.

8 34. The system of Claim 30, wherein said system comprises
9 a Compact EDGE communication system.

10 35. The system of Claim 30, wherein each of said intervals
11 comprises a block in a timeslot.

12 36. The system of Claim 30, wherein said first
13 transmission rate comprises a transmission at a full-rate.

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1 37. The system of Claim 30, wherein said first
2 transmission rate is higher than said second transmission rate.

3 38. The system of Claim 30, wherein said second
4 transmission rate comprises a transmission at a half-rate.

5 39. The system of Claim 30, wherein said non-real-time
6 data comprises control data.

1 40. A system for continuous allocation of real-time
2 traffic, comprising:

3 a network control unit; and

4 a terminal coupled to said network control unit by a
5 transmission medium, said network control unit further
6 comprising:

7 means for allocating a first unit of real-time data for
8 transmission during a first interval with a first transmission
9 rate;

10 means for allocating non-real-time data for transmission
11 during a second interval;

12 means for allocating a second unit of real-time data for
13 transmission during said second interval with a second
14 transmission rate; and

15 means for allocating a third unit of real-time data for
16 transmission during said second interval.

1 41. A system for continuous allocation of real-time
2 traffic, comprising:

3 a network control unit; and

4 a terminal coupled to said network control unit by a
5 transmission medium, said network control unit further
6 comprising:

7 means for allocating a first unit of real-time data for
8 transmission during a first interval with a predetermined
9 transmission rate;

10 means for allocating a second unit of real-time data for
11 transmission during said first interval;

12 means for allocating non-real-time data for transmission
13 during a second interval;

14 means for determining if said second interval is not
15 contiguous with said first interval, and if said second interval
16 is not contiguous with said first interval, allocating a third
17 unit of real-time data and a fourth unit of real-time data for
18 transmission during a third interval with said predetermined

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1 transmission rate, and allocating a fifth unit of real-time data
2 and a sixth unit of real-time data for transmission during a
3 fourth interval with said predetermined transmission rate, said
4 third interval contiguous with said second interval, and said
5 fourth interval contiguous with said third interval.